

**OPTICAL COMMUNICATION SYSTEM WITH VARIABLE ERROR  
CORRECTION CODING**

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**ABSTRACT**

A free space optical communication system with variable error correction includes an optical transmitter having a variable error correction encoder and an optical receiver having variable error correction decoder. The optical transmitter can encode the data to be transmitted with an error correction code having a data rate that varies depending on to the error rate or predicted error rate of the optical signal to optimize throughput of the data while maintaining accuracy.

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